the channel properties, and this can lead to an advantageous reduction in the signaling costs. This concept is referred to in the following as adapted SFN forwarding.

The third approach is signaling-free. The signal processing is based exclusively on the information available in the particular station or intermediate station or on characteristic quantities of the MHSFN system, such as channel attenuation and/or channel noise. No additional information on further or all intermediate stations is known. This concept is referred to in the following as blind SFN forwarding.

By an appropriate signal processing or special pre-equalization and/or equalization procedures in the intermediate stations, it is possible, for example, to achieve an advantageous constructive superposition of the signals at the location of the receiving radio station. To achieve this kind of in-phase superposition of the signals at the receiver, precise knowledge regarding the expected transmission channel must however be present and taken into account during signal processing. Reciprocal properties of the radio channel can sometimes be used in this case, that enable information on the behavior of the radio channel to be obtained on the basis of received signals. It must, however, be taken into account that the analog transmission channel is made up of the radio channel and the analog transmission or receiving front end. Whereas there is sufficient reciprocity of the radio channel, the transmission behavior of the transmission or reception front end can vary considerably particularly with regard to the phase response. Therefore, an in-phase prediction of the transmission channel can only be made if this difference is taken into account.